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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,174	02/26/2004	Hermann Haaga	029384.53187US	9143

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EXAMINER	
KARLS, SHAY LYNN	

ART UNIT	PAPER NUMBER
1744	

MAIL DATE	DELIVERY MODE
07/02/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/786,174	HAAGA, HERMANN	
	Examiner	Art Unit	
	Shay L. Karls	1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 April 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 3, 5, 7-8, 10, 12-13, 15 and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haaga (USPN 589661) in view of Gut et al. (USPN 4317253).

With regards to claims 1, 17, 20 and 21, Haaga teaches a hand-operated sweeping machine having two disc-shaped brooms (11, 12) that are mounted in the front area of the sweeping machine. The brooms are driven to rotate in opposite directions with a motor drive (col. 7, lines 13-22), or they can be driven by a driving means which transfers driving forces derived from forward motion of the sweeping machine to the circular brooms (col. 4, lines 64-67).

With regards to claims 3 and 18, there is an overriding coupling which allows the broom to run ahead of the driving means and is situated between the driving means and the brooms (col. 5, lines 59-67 and col. 6, lines 1-13).

With regards to claims 5 and 7, given that a motor drive or a driving means can be used and since an overriding coupling already exists between the driving means and the broom, it can be rationalized that an overriding coupling would also be located between the brooms and motor drive.

With regards to claims 8, 10 and 12 the overriding coupling is designed as a freewheeling coupling (col. 5, lines 66-67, col. 6, lines 1-3).

With regards to claims 13 and 15, the means for interrupting a drive connection between the circular brooms and the motor drive include an overriding coupling, which responds when the broom is turning more rapidly than the motor drive (col. 6, lines 3-13).

With regards to claim 19, the means for interruption are held electrically in an engaged position so that the brooms are not allowed to rotate in opposite directions. Thus the brooms are engaged to only rotate in one direction and the interruption mechanism prevents the brooms from spinning in an opposite direction.

Haaga teaches all the essential elements of the claimed invention however fails to teach that the machine comprises a driving means to transfer driving forces from forward motion of the sweeping machine to the disc brooms as well as a motor drive to rotate the brooms and an interrupting means for interrupting the mechanical connection between the motor drive and the driving means.

Since Haaga teaches that the sweeping device is capable of having either a driving means or a motor drive it is clear that one of skill in the art would know how to modify a manual sweeper to achieve an automatic sweeper or vice versa and would know the necessary means to switch from one mode to the other. Additionally, Gut teaches a rotary brush drive, which comprises a means for automatic interruption to overriding the clutch when the torque required to rotate the brush exceeds a predetermined level (col. 2, lines 3-13). In other words, the automatic rotary brush becomes disengaged from the motor when the brush becomes jammed or stalled to prevent damage to the motor and the brush can then be manually operated. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the sweeper of Haaga so that it is capable of performing both manually and automatically by means of an interruption device as taught by Gut to prevent the motor from burning out when the torque applied to the brush exceeds a certain limit (col. 1, lines 56-61).

Claims 2, 4, 6, 9, 11, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haaga ('611) in view of Gut (USPN 4317253).

Haaga in view of Gut teaches all the essential elements of the claimed invention as stated above, however fails to teach that there are separate motors provided for each broom (claim 2). The specification teaches separate drive means for each broom (col. 5, lines 22-54) and teaches using a motor to drive the brooms (col. 7, lines 13-22) however it is unclear if each broom has a separate motor. It would have been obvious to modify Haaga so that each broom has a separate motor since duplicating parts for a multiple effect is a modification that has been considered to be within the level of ordinary skill in the art. *In re Harza 124 USPQ 378, 380.* Additionally, having a separate motor for each broom would allow the user to adjust the speed of each broom

individually, so that they can rotate at different speeds or so that one can operate by the motor and the other could operate by the driving means.

Response to Arguments

Applicant's arguments, filed 4/26/07, with respect to Kress ('982) have been fully considered and are persuasive. The rejection of Kress has been withdrawn.

Applicant's arguments, filed 4/26/07, with respect to the rejection(s) of claim(s) 1, 20 and 21 under Haaga have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Haaga in view of Gut ('253). The applicant argues that Haaga does not teach that the brooms have both a driving means and a drive motor but only separate embodiments, which teach using one or the other. The examiner agrees with this statement however, even though Haaga only teaching using a driving means or a drive motor on different embodiments, it is clear that Haaga readily recognizes the ability to modify a manual to an automatic sweeper. Therefore one of skill in the art would also have recognized the benefits of having a sweeper being capable of manual rotation and automatic rotation. Since Haaga teaches the modification between the two embodiments, it would have been obvious to have both on the same invention to reap all the benefits of both. The Gut reference was then used to show how one of skill in the art would modify the invention to mechanically switch between automatic and manual rotation on an invention with both capabilities.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shay L. Karls whose telephone number is 571-272-1268. The examiner can normally be reached on 7:00-4:30 M-Th, alternating F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on 571-272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Shay L Karls
Patent Examiner
Art Unit 1744